

Listing and Amendments to the Claims

This listing of claims will replace the claims that were published in the PCT Application and the International Preliminary Examination Report:

1 – (currently amended) Broadband monopole antenna, comprising a radiating element (11)–mounted on an earth plane forming support (12)–of annular shape, ~~characterized in that~~ wherein the radiating element is constituted by a hollow element having a “cup” shape integral with the earth plane forming support, said radiating element and said support being made on the basis of a metallizable plastic or foam.

2 – (currently amended) Antenna according to Claim 1, ~~characterized in that~~ wherein the external profile of the “cup”-shaped radiating element is given by the following equations:

For $1.3 < t < 4.075$

$$x(t) = 8 + 1.9 * t * \cos(t - 7)$$

$$z(t) = 2.5 + 12.5 \frac{\sin(t)}{t}$$

3 – (currently amended) Antenna according to ~~any one of~~ Claims 1 and 2, ~~characterized in that~~ Claim 1, wherein the earth plane forming support (3)–of annular shape consists of a circular annulus (3a).

4 – (currently amended) Antenna according to Claim 3, ~~characterized in that~~ wherein the external end of the annulus is inwardly curved in such a way as to form a semi-toroidal element.

5 – (currently amended) Process for manufacturing an antenna according to any one of Claims 1 to 4, characterized in that the Claim 1, comprising a step of making a “cup”-shaped radiating element and the an earth plane forming support are made by injection moulding of a plastic followed by the metallization of a step of metallizing at least the exterior surface of the “cup”-shaped element and of the part forming earth plane.

6 – (currently amended) Process according to Claim 5, characterized in that wherein the metallization is achieved by vacuum spraying of the metal or by an electrochemical process.

7 – (currently amended) Process for manufacturing an antenna according to any one of Claims 1 to 4, characterized in that the Claim 1, comprising a step of making a “cup”-shaped radiating element and the earth plane forming support are made by machining a single block of plastic foam followed by the metallization of a step of metallizing at least the exterior surface of the “cup”-shaped element and of the part forming earth plane.

8 – (currently amended) Process according to Claim 7, characterized in that wherein the metallization is achieved by atomization of an electrically conducting paint.

9 – (new) Process according to claim 5, wherein the metallization is achieved by an electrochemical process.